Information Sciences Letters
An International Journal

http://dx.doi.org/10.18576/isl/121011

Attitudes of Teachers Towards Blended Learning and Their Training Needs

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Received: 28 Jun. 2023, Revised: 1Aug. 2023, Accepted: 28 Sep. 2023.
Published online: 1 Oct. 2023.

Abstract: This study aimed to showcase the attitudes of upper basic stage teachers towards blended learning and their training needs in Jordan. The study employed a descriptive correlational methodology and formulated two instruments, confirming their validity and reliability. Data was collected from a sample of (119) educators, comprising both male and female teachers, chosen through random selection. The study's results showed that the attitudes of teachers towards blended learning were medium, with a total arithmetic mean of (3.60), and the degree of training needs to employ blended learning in teaching was high, with a total arithmetic mean of (3.86). The study concluded that there is a positive correlation between teachers' attitudes toward blended learning and their training needs. The study reached several recommendations, taking advantage of the positive attitudes of primary school teachers towards blended learning in teaching and profiting from its educational features.

Keywords: Attitudes, Blinded Learning, Needs, Teaching,Training.

1 Introduction

Over the past and current century, the world has witnessed many profound and accelerating technological innovations and substantial changes in the world of work driven by developments of technology. Keeping up with the pace of changes is a continuing challenge for learning institutions in societies. Hence, various stakeholders have collaborated to facilitate the enhancement of global education systems, a requirement driven by the need to cater to the varied requirements and situations of learners. This collaboration involves acknowledging and valuing the skills and knowledge they contribute to the process of teaching and learning, especially in light of global trends, including e-learning, blended learning.

The world today is being invaded by technology, and this necessarily requires reimagining its role in education. The traditional education system does not serve the needs of the current generation. With the incorporation of the Internet into educational settings, the utilization of mobile devices such as tablets has become feasible within classrooms. When carefully designed and thoughtfully applied, they can accelerate, amplify, and expand the impact of effective teaching practices and adapt learning experiences to meet the needs of all learners [27,31].

Education institutions generally feel that technology has a broadly positive effect on the quality of teaching and learning. In order to utilize it effectively, e-learning has emerged and is considered one of the most powerful responses to the growing need for teaching-learning processes (Indra et al., 2022). E-learning is defined as online learning through network technologies, and it includes synchronous learning, where student and teacher experience real-time interaction although they are in different places, and asynchronous learning, in which students are separated in time as well as the place from their classmates and their instructor and provided with opportunities to transfer and share information with their colleagues. Blended learning is derived from E-learning; it combines online educational materials and opportunities for interaction online with traditional place-based classroom methods. [20,8].

Blended learning implements both onsite and online students at the same time. The definitions of blended learning that are most frequently cited in literature revolve around a general agreement that the key ingredients are face-to-face and online learning [28].

Blended learning outweighs other learning methods by making instruction delivery effective and result-oriented right from the start; by integrating e-learning, self-progress, and face-to-face classroom learning, it is no more limited by distance and cost. In addition, blended learning involves reorganizing all of the foundational elements of the educational process, including the roles of students and teachers and even the educational position as a whole [4]. Since blended

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learning is a fusion of online and face-to-face learning, the compelling reasons behind employing it is that it maintains communication between learners and teachers, provides learners with the opportunity to complete the academic subjects in accordance with their time and place, develops the spirit of teamwork, focuses on self-reliance and ensures the achievement of program outputs that focus on all teaching and learning skills [13,9].

Al-Subaie and Al-Qubati [11] assures the need to adopt the concept of blended learning and urge educational leaders to build computerized educational programs in a format that suits their specializations to facilitate the delivery of information. Also, the challenges and problems facing e-learning were behind the reasons that called for the interest in blended learning, such as the absence of teachers' roles, high cost, poor discipline, and responsibility, reliance on ineffective technologies in some parts of the world, primarily rural or remote places, the lack of feedback and searching for information from different sources, which led to the emergence of blended learning, and considered the natural and logical development of e-learning.

Blended learning is characterized by the presence of an interactive educational environment. Also, it helps learners to participate positively with education resources, saves time and effort, happens in face-to-face sessions, and extends to online spaces as well, happening anywhere at any time at students' preference, caters to individual differences, develops learner's self-learning, helps in understanding subjects that are difficult to teach remotely, moves from group-oriented to learner-centered instruction that enhances usefulness and effectiveness in promoting interactions between students and their peers, their teachers, and course materials [12, 14, 15].

Furthermore, students' attitudes toward using technology in the teaching-learning processes increase their motivation and sense of equality in educational opportunities, develop the cognitive and performance aspect, and meet their individual needs so that they learn at their own pace [12]. Blended learning also aims to support students' performance by employing technological innovations, increasing direct and indirect interaction with teachers and educational content, developing the cognitive and performance aspects of students, and achieving democracy in education [19, 25].

In today's professional landscape, employees are required to demonstrate proficiency in executing intricate duties efficiently, economically, and securely. Identifying training requirements represents the initial phase of a standardized approach to developing instructional strategies. This process optimizes the utilization of training resources while evaluating practical and theoretical job competence. The school's success depends on the success of the teacher, his creativity, and his achievement of the greatest benefit for the least effort, time, and cost [30].

The primary education stage is the most important because, without a firm foundation, students cannot have a basis to build on to learn more. Training is an active and continuous process that provides primary-stage teachers with knowledge, experiences, skills, and attitudes that enable them to develop their professional competencies and increase their productive skills [16].

The quality of a teacher is an important factor that influences improvements in student accomplishments, even when considering previous student progress. Providing teachers with the necessary training needs enhances their skills, experiences, and knowledge in their practical and scientific careers, both inside and outside the school, which leads to raising their efficiency and improving their performance.

AL-sharman [10] indicates that blended learning shifts the teachers' role from knowledge provider to coach and mentor. Therefore, teachers must be effective facilitators in the online space, able to use data to drive instruction, create targeted learning opportunities, and give students permission and space to develop their skills and thinking patterns. Furthermore, in a blended environment, teachers must provide the opportunity and allow similar peer interaction and teaching face-to-face as well as online.

Moreover, the use of blended learning requires a high level of skill and experience for both teachers and learners to deal professionally with technology. Teachers need to manage the learning process for each learner and democratize teaching because, in the classroom, the shyest students can go unnoticed, while blended learning provides teachers with a fuller, more accurate picture of how each student is doing, which in turn, help learners to interact, build ideas, participate positively with educational resources and strengthen their social relationship with their teachers [7, 26].

Despite the numerous benefits, there are challenges experienced in the delivery of blended learning that is noteworthy to investigate, such as teachers not inclined towards blended-based instruction, lack of learners and teachers' IT skills, limitations of the technological infrastructure, lack of acceptance of technology and methodologies, poor internet bandwidth and lack of awareness and planning for blended learning.

A plethora of research has investigated the blended learning experience. Al-Subaie and Al-Qubati [4] carried out a study aimed at identifying the reality of using blended learning from the perspective of teachers of Arabic language teachers in Saudi Arabia. In addition to applying a measurement to a random selection of (250) male and female teachers, the study employed a descriptive method. The study found that the degree of blended learning obstacles was

high and that the degree of blended learning reality for male and female Arabic language teachers was generally intermediate.

Al Anezi [2] investigated the degree to which secondary school teachers in the state of Kuwait use blended learning from their viewpoints. The research employed a descriptive approach and included a sample of (217) secondary school educators and principals. The findings indicated a moderate level of adoption of blended learning as perceived by both teachers and principals.

Majali [22] carried out research aimed at assessing the extent to which primary school educators in Amman employed a blended learning approach. The research employed a descriptive methodology and included a participant group of both male and female teachers, totaling 350 individuals. The findings indicated a moderate level of utilization of the blended learning strategy.

Al-Hadhoud & Al-Hattami [6] carried out an investigation with the objective of evaluating the degree of integration of blended learning in Jordan and identifying the obstacles that hinder its application. Utilizing a descriptive approach, the researchers opted for a cohort of (110) educators from the Fifth Amman Education Directorate as their study sample. The findings demonstrated that the Fifth Amman Education Directorate had moderately incorporated blended learning. Furthermore, multiple hindrances to the adoption of blended learning were identified, including issues like inadequate internet connectivity, lack of consistent access to the internet, and limited internet availability.

Martinsen [23] undertook research with the aim of identifying the advantages and drawbacks of blended learning, as well as exploring the viewpoints of students and educators in two secondary science classes in Australia. A convergent mixed methods strategy of inquiry was used to collect and analyze qualitative and quantitative data. The study sample consisted of (52) students. Results demonstrated that blended learning had a positive effect on students' achievement. Also, the results revealed mixed perceptions of blended learning with the majority of students.

A wide range of research with differing scopes and objectives was examined as part of the study. Some of them aimed to identify the reality of using blended learning from the perspective of primary school teachers [11, 2, 22]. In contrast, others aimed to identify the potential and pitfalls of blended learning. [6, 23]. Also, the study of Sorbie [29] aimed to detect teachers' perceptions of blended learning and its impact on teaching practices in secondary schools in America.

The present research builds upon previous studies to enrich the theoretical literature, refine the study instrument, select the methodology, and analyze the results. To the best of the researchers' knowledge, this study represents the first of its kind, aiming to identify the attitudes of upper basic stage teachers towards blended learning and their training needs for its effective implementation in teaching. While most previous studies have focused on the actual implementation of blended learning or its associated obstacles, none of them have specifically addressed the necessary training required by teachers.

1.1 The problem of the study

The emergence of educational technology has driven the evolution of blended learning, solidifying its role as a fundamental element across various educational settings. Blended learning is built upon the integration of online and in-person education, leveraging technology to enable comprehensive digital learning.

A rock-solid piece of evidence (e.g., Othman, [24]; Al-Arini, [3]; Abu Musa & Al-Sousa [1] traced the importance of adopting a blended learning strategy and its effective results in increasing achievement and retention of learning.

From the researchers' teaching and supervisory background, it became apparent that there are variations in how teachers' attitudes and perceptions of blended learning are formed. Hence, knowing teachers' attitudes toward blended learning is highly related to its actual use. Otherwise, they will be reluctant to include technology in face-to-face education.

Accordingly, this study seeks to reveal the attitudes of upper basic schoolteachers in public schools in Amman, the capital, towards blended learning and their training needs from their perspectives. Three questions drove the subsequent data collection:

- What are the attitudes of upper-basic schoolteachers in public schools in Amman towards blended learning from their perspectives?
- What are the training needs of upper-basic schoolteachers needed to employ blended learning in teaching from their perspectives?
- Is there a statistically significant correlation between the teachers' attitudes toward blended learning and their training needs?

1.2 Objective of the study

The study aimed to determine the attitudes of upper basic stage teachers towards blended learning and assess their training needs for its effective integration into teaching.

1.3 Significance of the study

After reviewing research on the topic of blended learning, it was rated as extremely important in the teaching process. The current study's findings are expected to contribute to educational literature by providing potentially significant information and new insights on the attitudes of upper-basic schoolteachers in public schools in Amman, the capital, towards blended learning and their relationship to the training needed to employ it in teaching. Also, curricula designers may benefit from the theoretical literature by adopting such a strategy in order to benefit from students' efficiency and technical capabilities. While determining the training needs helps in good planning and ensures that the teachers are adequately prepared. The findings and recommendations of the study may lead to more research on the topic. The study is also expected to provide a list of training needs for upper-basic schoolteachers to employ in blended learning.

1.4 Definition of Terms

Blended learning: it is learning that combines traditional classroom instruction and online learning in an integrated model, taking advantage of the new technological paradigm for each [10]. In this study, it is a systematic blending between the traditional and electronic teaching processes characterized by comprehensiveness, accuracy, and organization where the teacher seeks to assist the students with the expected outcomes and meet their needs.

Attitudes towards blended learning: The emotional intensity towards blended learning by rejection, acceptance, or hesitation, and evaluated according to the score on the scale prepared [5]. In this study, they are the responses of upper basic stage teachers towards blended learning (rejection, acceptance, or hesitation) and measured by the total score obtained on the study instrument prepared for this purpose.

Training needs*:* It is a set of information, skills, attitudes, and technical and behavioral capabilities required to help trainees keep abreast of the dynamic changes and developmental aspects [21]. In this study, it is a set of attitudes, skills, information, behavioral and technical capabilities that teachers in the upper basic stage in public schools in Amman, the capital, should employ in blended learning to achieve the desired teaching goals and to keep pace with the successive developments in the field of skills, competencies, knowledge and training that will be determined by the study instrument.

1.5 Limitations of the study

Generalizability of results may be limited to determining attitudes of public-school teachers in Amman towards blended learning and their training needs from their perspectives, in the first semester of the academic year 2022/2023, in addition to being restricted to the accuracy and objectivity of the respondents, the validity and reliability of the study instrument and the same society from which the sample was obtained.

2 Methodologies

The study used the descriptive correlative approach, in which the attitudes of upper basic schoolteachers towards blended learning and their training needs were measured through two instruments developed by the researchers after extracting their psychometric properties**.**

2.1 Study Population and Sample

The study focused on upper-basic school educators within the University District of Amman. The research sample covered (119) male and female teachers, selected from the larger population using a random sampling method.

2.2 Study Instruments

Based on a thorough analysis of the literature and in order to fulfill the study's objectives, the following instruments were developed:

A 21-item questionnaire was developed to identify the attitudes of upper basic schoolteachers in public schools in Amman, the capital, towards blended learning from their perspectives. The instructors' answers were measured using a five-point Likert scale "strongly agree," "agree," "neutral," "disagree," and "strongly disagree.".

2.3 The validity of the first instrument

Education specialists assessed the measure in order to assess its validity. The team was tasked with confirming the content validity of the instrument's items, appropriateness for the current study's goals, linguistic clarity, and how well they represent the attitudes of upper basic schoolteachers in public schools in Amman towards blended learning and their training needs from their perspectives. The suggestions were taken into consideration when making changes to the instrument's final version. The correlation coefficients (r†) of the study instrument with the total score were also calculated, as shown in Table 1.

Table 1: Correlation coefficients($r^{\dagger}$) of the study instrument items with the total score

No	$r^{\dagger}$	No	$r^{\dagger}$	No	$r^{\dagger}$	No	$r^{\dagger}$
1	0.36	6	0.64	11	0.42	16	0.71
2	0.41	7	0.58	12	0.51	17	0.45
3	0.38	8	0.52	13	0.52	18	0.66
4	0.75	9	0.63	14	0.57	19	0.35
5	0.42	10	0.60	15	0.49	20	0.55
						21	0.77

Table 1 indicates that the correlation coefficients of the study instrument with the overall score spanned across a range of values from (0.35 - 0.77) which were regarded as appropriate for conducting the study.

2.4 The reliability of the instrument

Cronbach's alpha was utilized to gauge the reliability of the test, yielding a correlation coefficient of (0.91), which was considered relevant for the purpose of the current study.

A 22-item scale was developed to measure the training needed to employ blended learning in teaching from the teachers' point of view by applying a five-point Likert scale.

2.5 The validity of the second instrument

The same group of educational specialists examined the measure to evaluate its validity. The group was asked to evaluate the instrument's content in terms of its items, suitability for the objectives of the current study, the clarity of the language, and the extent to which they represent the training needs necessary for upper-basic schoolteachers to use blended learning from their perspectives. The final version of the instrument was modified after carefully considering the comments and suggestions made by the teams.

The correlation coefficients of the study instrument with the total score were also calculated, as shown in Table 2.

Table 2: correlation coefficients of the study instrument with the total score

No	$r^{\dagger}$	No	$r^{\dagger}$	No	$r^{\dagger}$	No	$r^{\dagger}$
1	0.49	6	0.47	11	0.59	16	0.72
2	0.39	7	0.44	12	0.69	17	0.49
3	0.59	8	0.66	13	0.55	18	0.83
4	0.75	9	0.51	14	0.52	19	0.63
5	0.60	10	0.55	15	0.45	20	0.58
				21	0.58	22	0.69

Table 2 illustrates that the study instrument displayed correlation coefficients with the total scores ranging from 0.39 to 0.83. These values were considered appropriate for the implementation of the study.

2.6 The reliability of the second instrument

The study instrument's reliability was confirmed and yielded a strong item-scale correlation, indicated by a reliability coefficient Alpha of (0.88), which was regarded as high and appropriate for the study's execution.

2.7 Rectifying the study instruments

Instructor responses were evaluated using a “five-point Likert scale”, where “strongly agree,” “agree”, “neutral,” “disagree,” and “strongly disagree” were assigned numerical values of” five, four, three, two, and one”, respectively. These numerical values were then categorized into three levels: high, intermediate, and low degrees. Consequently, the scores ranged from (21 to 105)for the first instrument and from (22 to 110)for the second instrument.

Mean scores were compared to specific benchmarks: scores of 1.00 to 2.33 were categorized as Weak, scores of 2.34 to

3.66 as Intermediate, and scores of 3.67 to 5.00 as Strong. The percentage was calculated using the formula:"*f = (Highest value – Lowest value) / Number* of categories". For this study, the highest value was 5, the lowest value was 1, and there were 3 categories. As a result, the appropriate class interval was calculated as 5 - 1 / 3 = 1.33, as shown in Table 3 below:

Table 3: Class intervals for the study instruments

Class intervals	Class
1 - 2,33	low
2.34 - 3.67	medium
3.68 - 5.00	high

2.8 Statistical treatment

In order to assess the attitudes of upper basic schoolteachers in public schools regarding blended learning and their training needs, the study calculated the means and standard deviations of the scores obtained from the sample using SPSS statistics. To examine the relationship between teachers' attitudes and their training requirements, the Pearson correlation coefficient was utilized.

2.9 Study procedures

The study's procedures included the following:

- Selecting relevant literature for the purpose of review to focus the topic and gather relevant theoretical and empirical studies.
- The study's instruments were created.
- An expert jury determined the authenticity of the instruments.
- The instrument's consistency was confirmed by using it on a pilot group of thirty teachers.
- The research sample and population were delineated.
- The research tools were dispersed throughout the study sample.
- Data was gathered.
- Appropriate statistical analyses were used to produce the study's results.
- The study's results were examined and discussed.
- The guidelines were established in light of the study's findings.

3 Results and Discussion

The initial research question sought to identify the attitudes of upper-basic schoolteachers in public schools in Amman toward blended learning. The means and standard deviations of teacher responses from the initial research tool were computed, and the cumulative score was presented in "Table 4."

Table 4: Means and standard deviations of the teachers' attitudes towards blended learning and their total score

No	Item	Mean	SD	Rank	Class
1	Keep pace with the requirements of the current era.	3.75	1.04	4	High
2	Combines direct and self-learning.	3.75	1.01	5	High
3	Increases students' effectiveness.	3.41	1.13	19	medium
4	Provides an interesting and attractive learning environment.	3.45	1.17	18	medium
5	Easy access to knowledge resources anytime and anywhere.	3.92	0.97	1	High
6	Develops research method and investigation among students.	3.66	0.98	6	High
7	Motivates students to shoulder responsibility for their own learning.	3.64	1.11	10	medium
8	Improves my teaching performance.	3.55	1.11	13	medium
9	I need experience with modern technologies to employ blended learning in teaching	3.87	0.93	2	High
10	Adds a new burden to both teacher and students.	3.47	1.21	17	medium
11	Reduces the teacher's role by replacing him with technology.	3.22	1.19	21	medium

12	Save teachers and students time and effort	3.64	1.04	11	medium
13	Encourages me to develop and diversify assessment strategies.	3.65	1.09	8	medium
14	Blended learning strategy helps me develop my technology skills	3.54	1.02	15	medium
15	Develops students' problem-solving techniques	3.51	0.96	16	medium
16	Encourages and sustain self-learning	3.65	1.00	9	medium
17	the cons of blended learning outweigh the pros	3.32	1.19	20	medium
18	Helps in solving students' dropout and overcrowded classrooms	3.55	1.05	14	medium
19	Motivates me to create and innovate.	3.60	1.06	12	medium
20	Helps in carrying out a variety of educational activities.	3.66	1.04	7	High
21	Encourages me to search and find out.	3.81	1.05	3	High
	Total degree	3.60	0.63		medium

Table 4 depicts that item 5*(Easy access to knowledge resources anytime and anywhere)* ranked first with a mean of 3.92(SD 0.97), while item 11*(Reduces the teacher's role by replacing him with technology)* received the lowest score and ranked last with a mean of 3.22 (SD 0.19). The overall instrument received an average response, with a mean score of 3.60 and a standard deviation of 0.63. The measured attitudes suggest a moderate level of impact. On the instrument as a whole, the average response yielded a mean score of 3.60 and a standard deviation of 0.63, indicating a moderate degree of influence as measured by the attitudes.

This result may be attributed to the negative effects caused by the corona pandemic on the public education sector, as all educational institutions were forced to activate blended learning to support a safe return to in-person learning in schools, and this required good preparation by the Ministry of Education to ensure successful implementation of blended learning without any technical or external obstacles, which contributed positively on teachers' attitudes. The result may also be attributed to the advantages of blended learning that enabled teachers and learners to access the materials and global resources from anywhere at any time that meet the student's level of knowledge and interest while enjoying the benefits of face-to-face support and instruction. Also, blended learning supports individual learning, cooperation, organization, and participation, shifting the focus of instruction from the teacher to the student, which goes in line with global attitudes calling for learner-centered education.

As for the medium degree of teachers' attitudes about the possibility of dispensing with the teacher during blended learning, the studies of Sorbie [29];] Martinsen [23], & Al-Hadhoud [6] reached the same result, which could be attributed to the lack of clarity in the idea of blended learning for some teachers, who feel that putting learners in the spotlight and applying purely student-fronted teaching might threaten their position and status in the class, causing students cast doubt that teacher is no longer required to their learning.

The second research question sought the necessary training needs for teachers of the basic stage to employ blended learning. Means and standard deviations of the study sample responses on the second study instrument and their total score were calculated as shown in Table 5.

Table 5: Means and standard deviations of the study sample responses on the second study instrument and their total score

No	Paragraph	Mean	SD	Rank	Class
1	Identifying what blended education is.	3.79	0.93	4	High
2	Knowing the tasks and roles of the teacher in blended education to achieve them.	3.86	0.86	2	High
3	Identifying the rationale for using blended learning in teaching.	3.84	0.81	3	High
4	Recognizing the method of linking practical life with lessons through blended learning.	3.74	0.83	7	High
5	Recognizing the methods of optimal use of blended learning in teaching.	3.71	0.88	10	High
6	Dealing with digital photo editing software such as Paint.	3.44	0.95	22	medium
7	Recognizing global experiences in the application of blended learning in teaching.	3.50	0.96	21	medium
8	Managing discussion effectively when applying blended learning to teaching.	3.58	0.89	17	medium
9	Recognizing the roles of teacher and student in blended learning.	3.79	0.86	5	High
10	Training on lesson planning skills in blended learning.	3.64	0.87	14	medium
11	Knowing how to implement the lesson through blended learning.	3.69	0.86	11	High
12	Identifying effective methods in providing an attractive environment for learning.	3.65	0.92	13	medium

13	Training on dealing with the necessary operating systems in the application of blended learning.	3.69	0.89	12	High
14	Use search engines to get educational video clips suitable for lessons.	3.72	0.93	8	High
15	Using online social networks.	3.77	0.88	6	High
16	Using audio editing and recording software.	3.90	0.90	1	High
17	Using blogs to find space for students to share.	3.61	0.92	16	medium
18	Possessing the skills of preparing digital tests.	3.55	0.93	18	medium
19	Training on creating, organizing, and sharing digital resources.	3.54	0.95	19	medium
20	UsingPowerPoint presentation software..	3.52	0.96	20	medium
21	Identifying the effective self-assessment methods in blended learning.	3.63	0.96	15	medium
22	Training on programs for creating educational communication groups.	3.72	0.88	9	High
	Total degree	3.68	0.70		High

Table 5 shows that paragraph 16," *Using audio editing and recording software*," received the highest score with a mean of 3.90 (SD 0.90), while paragraph 6, "*Dealing with digital photo editing software such as Paint*", received the lowest score with a mean of 3.44 (SD0.95). The average response on the instrument as a whole got a mean score of (3.68) and a standard deviation of (0.70), in which the attitudes measured indicate a degree of high effect.

This outcome could be linked to the possibility that teachers might not have participated in more advanced training sessions, as they had never made an educational video before, nor had they produced or dealt with digital content or been engaged in producing effective training videos, this outcome could be attributed to the likelihood that teachers may not have engaged in more advanced training sessions. On the other hand, teachers did not face any difficulty in dealing with simple computer programs, such as Painter and digital imaging software, since the Jordanian education system has embraced several ICDL and INTEL training courses for pre and in-service teachers, in addition to teacher training programs provided by Queen Rania Teacher Academy.

The third research question sought to find out whether there is a statistically significant correlation between the teachers' attitudes toward blended learning and their training needs. The relationship between the scores of the study sample members on the two scales was calculated using the Pearson test. The value reached (0.64), indicating a statistically significant positive relationship between the two scales.

This result may be attributed to the fact that teacher training is reflected in their attitudes toward blended learning. Employing blended learning requires a high level of experience that differs from the experience of regular education. Teachers whose training needs have been met are expected to be more efficient in managing the education process, creating an environment that inspires learning and helps students develop the confidence they need to be self-directed learners in all of their lifelong endeavors. Moreover, prioritizing training needs contributes to overcoming the difficulties during employing blended learning, which might reflect positively on teachers' attitudes. This is confirmed by the competency-based educational approach, which is one of the most common trends in professional teacher preparation and in line with the future of learning and work due to its connection with the concept of work-oriented training that prepares teachers for the job market [32, 17]. This result agreed with [6, 23], which addressed the difficulties facing blended and e-learning and the training needed to help teachers make these shifts in their instruction.

4 Conclusions and Recommendations

The study's findings indicated that upper basic stage teachers held a moderate level of attitudes towards blended learning. Additionally, the results highlighted a significant training requirement for effectively utilizing blended learning approaches. Furthermore, a positive correlation was observed between teachers' attitudes towards blended learning and their training needs in this area. Based on these conclusions, the researchers recommend leveraging the favorable attitudes of primary school teachers towards blended learning to enhance teaching practices and capitalize on its educational benefits. It is advisable to provide comprehensive training for primary school teachers, equipping them with the necessary educational and technical competencies to effectively implement blended learning. Moreover, fostering collaborative partnerships with educational institutions is encouraged to support the integration of blended learning and to harness technology and smart devices to enrich the overall educational experience.

Author Contributions

Nusaiba A and Fawwaz S were involved in formulating and designing the study. Suad A coordinated the literature review, while Nusaiba A and Fawwaz S handled the statistical analysis. Khalil F initiated the initial draft of the manuscript. All authors -Nusaiba A, Fawwaz S, Suad A, and Khalil F- contributed to various sections of the manuscript.

Nusaiba A adapted the manuscript to meet the journal's formatting requirements. All authors participated in revising the manuscript, reviewing, and approving the final submission.

Conflict of interest

The authors state that there are no conflicts related to the publication of this paper.

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